

[0132] FIG. 8 depicts an example process 800 of an automatic vision diagnostic operation and a control of a displayed graphical output. At operation 802, the processor may direct an optical sensor system (e.g., the optical sensor system 102) to capture dynamic facial data of a face of a user. In some embodiments, the dynamic facial data may be a video of the user's face for a predetermined period of time. In some embodiments, the dynamic facial data may be a series of pictures taken at regular intervals. In some embodiments, the dynamic facial data may be a series of pictures of a dot pattern projected on the user's face.

[0133] At operation 804, the processor may analyze the captured dynamic facial data to detect eye movements of the user while the user is perceiving the graphical user interface on the electronic device. For example, the processor may use image processing techniques to detect a jitter or movement of the user's eye. The movement of the user's eye may be measured over a predetermined period of time.

[0134] At operation 806, the processor may determine an eye strain condition of the user. The eye strain condition may correspond to or be based on characteristic eye shifting, squinting, or other type of eye movement. In some cases, the processor may determine a threshold likelihood that the user is struggling to view the standard graphical output based on the detected eye movements (e.g., the processor may determine an eye strain condition). For example, if the eye movements of the user are rapid and frequently dart back and forth, the processor may determine that the user is experiencing eye strain. The processor may track certain visual fiducials on the user's eye (e.g., a center of the user's pupil) and may measure the movement of the fiducial to determine the threshold likelihood that an eye strain condition is met. As used herein, the eye strain condition may be used to refer to a variety of possible eye strain states of the user. The detected eye movement may also include a detection of a squinting or strain of the user's eye during a perceived reading activity. The processor may, through the detection of eye movements, provide, for example, a numerical value of a user's eye strain condition. For example, if the eye strain condition is determined to be below a threshold value after a statistical analysis, the user may be determined to not be experiencing sufficient eye-strain. If the eye strain condition is above the threshold value, the processor may consider an eye strain threshold to be surpassed and may consider the user to be experiencing heightened eye strain. At operation 810, the processor determines whether this threshold is met or surpassed.

[0135] At operation 810, the processor may determine that the threshold likelihood is not met or surpassed and that the user is not struggling to view a graphical output. The processor then may direct an associated display to display a standard graphical output.

[0136] At operation 812, the processor may determine that the threshold likelihood is met or surpassed, may generate a vision-corrected graphical output, and may display the vision-corrected graphical output. The vision-corrected graphical output may be designed to reduce the vision strain of the user, for example, blurring a portion and/or the entirety of the standard graphical output; generating an overlay over the standard graphical output; and/or making elements of the standard graphical output larger, brighter, and/or more distinct. In some embodiments, the generated vision-corrected graphical output may replace the previously displayed standard graphical output and may be pre-

sented to the user instead of the standard graphical output. Additionally, the vision-corrected graphical output may only replace certain graphical elements presented in the standard graphical output. The vision-corrected graphical output may be a default graphical output designed to compensate for a myopic vision or may be generated based on the individual prescription of the user.

[0137] In some embodiments, a vision-corrected graphical output may be initially displayed to a user and the vision-corrected graphical output may continue being displayed at operation 812 and a standard graphical output may be generated/modified and displayed at operation 810. In some embodiments, a standard graphical output may be initially displayed to a user and the standard graphical output may continue being displayed at operation 812 and a vision-corrected graphical output may be generated/modified and displayed at operation 810.

[0138] The process 800 is an example process for an automatic vision diagnostic operation and a control of a displayed graphical output. Such processes may omit and/or add steps to the process 800. Similarly, steps of the process 800 may be performed in different orders than the example order discussed above.

[0139] FIG. 9 depicts an example process 900 of generating and displaying a privacy screen in response to a facial scan of a user. For a standard graphical output, a user may experience certain privacy concerns. For example, surrounding people may be able to view a display of an electronic device in the possession of the user on, for example, a crowded restaurant or bus. If the user wanted to view highly sensitive content, the user would either need to move to a more private location or physically block a view-line of the surrounding people. The process 800 depicted here, creates a private graphical output that can only be perceived by a wearing of a particular set of glasses.

[0140] At operation 902, a processor of an electronic device may direct an optical sensor system (e.g., the optical sensor system 102) to perform a facial scan of the user. The facial scan may be performed in a manner as discussed with respect to FIG. 1 (e.g., by creating a three-dimensional depth map from a projected dot pattern or by performing an image recognition analysis on a two-dimensional image). Once a scan of the user's face is performed, the processor may determine that depth maps of the scanned face shares a first similarity score with a pre-registered identity depth map to confirm an identity of the user. If the identity is confirmed, the processor may further determine if the depth maps of the scanned face corresponds to a pre-registered alternate appearance, as discussed herein, by sharing a second similarity score.

[0141] At operation 904, the processor may detect the presence of a privacy eyewear on the face of the user from the facial scan taken at operation 902. The privacy eyewear may be detected by comparing the depth maps taken from the facial scan taken at operation 902 with previously registered depth maps corresponding to an alternate appearance of the user. The previously registered depth maps may have been marked as "Private" or may otherwise be listed as a private profile. In some embodiments, the privacy eyewear may be marked with a particular graphic, QR code, bar code, and the like. The processor may detect the presence of the marking and may determine the presence of the privacy eyewear. In some embodiments, the privacy eyewear may be provided as a separate eyewear that intentionally distorts a